

REMARKS

Applicants gratefully acknowledge express withdrawal of three previous obviousness rejections under 35 U.S.C. 103.

Applicants note by way of comment that the second obviousness rejection discussed below (i.e., that based on Strom et al, the cited Stock et al article, Mauler-Machnik et al, and Heinemann et al) is similar but not identical to a previous obviousness rejection that additionally relied upon U.S. Patent 5,393,770 ("Grayson"). Although this rejection is not one of the three referred to above, Applicants have treated this rejection as a new rejection that no longer relies on the teachings of Grayson.

Rejections under 35 U.S.C. 103

Applicants note at the outset that the Final Office Action at page 14 criticizes their previous arguments as having been made against the references individually. Applicants respectfully submit that they have not argued in such a piecemeal fashion but instead discuss each reference in proper context and show how they do not together lead those skilled in the art to the conclusions stated in the rejections. As will be discussed in more detail below, a proper determination of obviousness requires more than finding individual components within individual references. As stated by the Supreme Court in *KSR International v. Teleflex*, 82 U.S.P.Q.2d 1385, 550 U.S. 398 (2007), a finding of obviousness requires "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." See 82 U.S.P.Q.2d at 1386 (quoting *In re Kahn*, 78 U.S.P.Q.2d 1329, 441 F.3d 977, 988 (Fed. Cir. 2006)).

A. Strom et al in view of Stock et al and Aven

Claims 11, 14, 15, 17, and 22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Published Application 2001/0051,175 ("Strom et al") in view of an article by Stock et al in *Pestic. Sci.*, 37, 233-245 (1993) and in further view of EP 1023832 ("Aven"). Applicants respectfully traverse.

As has been fully discussed in Applicants' previous Amendment dated December 16, 2009, **Strom et al** discloses aqueous dispersions of particles having pesticidal activity comprising **(1)** about 1 to about 60 percent by weight of a pesticide having (a) a low water solubility of less than 0.1 percent and (b) a melting point sufficiently high so as not to melt during milling and **(2)** a stabilizing amount of a surface active agent,

wherein the dispersion has a volume mean diameter particle size not greater than about 450 nm. E.g., page 1, paragraph [0004]. As conceded in the Final Office Action at page 5, Strom et al does not teach alkanolethoxylates. Given the broad scope of surfactants described as suitable (e.g., page 1, paragraph [0014] through page 2, paragraph [0015]) and the absence of any suggestion of alkanolethoxylates, Applicants maintain that those skilled in the art would find little if any reason to use the very specifically defined combination of narrowly defined alkanolethoxylate penetration enhancers and very specific types of two-component polymeric dispersants as specified in their claims to make suspension concentrates containing the specific group of solid active compounds specified in their claims. Even if – as stated in the Final Office Action at page 15 – many of the pesticides within Applicants' claims are disclosed in the reference (e.g., at page 1, paragraphs [0011] to [0013]), the failure of Strom et al to suggest Applicants' components (b) and (c) cannot be ignored.

The Final Office Action at pages 5-6 and 15-16 relies upon the **Stock et al article** for its theoretical framework for predicting agrochemical uptake using polyoxyethylene surfactant adjuvants. Even if this article might be useful to those skilled in the art, they would find within the reference a teaching that best results are obtained in some cases when an alkanol alkoxylate has a high ethylene oxide content as represented by AE15 and AE20 (having 15 and 20 ethylene oxide units, respectively) but in other cases when alkanol alkoxylate has a low ethylene oxide content as represented by AE6 (having 6 ethylene oxide units). See section 3.1 at page 236 and again at page 240, as well as section 3.4 at page 242, right column, and the Abstract. Moreover, for compounds with an intermediate log P, no correlation with ethylene oxide content was observed. See Section 3.1 ant page 241, left column. This is hardly indicative of the predictability suggested in the Final Office Action. Applicants maintain that the results described in the article would not suggest the use of the very narrowly defined alkanolethoxylates of their formula (I) in which n ranges from 8 to 12. Even if all of these teachings and differences are ignored, the Stock et al article does not suggest components within Applicants component (c) and does not disclose the fungicides specified for Applicants component (a) (something conceded in the Final Office Action at page 6).

Applicants therefore maintain that Strom et al and the Stock et al article are insufficient to lead those skilled in the art to their claimed invention. Applicants also maintain that Aven adds nothing that would bridge the gap between these two references and their claimed invention.

As has been fully discussed in Applicants' previous Amendment, **Aven** discloses aqueous suspension concentrates comprising **(a)** 50 to 400 g/L of a crop protection compound; **(b)** 50 to 500 g/L of an adjuvant that can reduce surface tension in a resultant spray dilution to 40 mN/m or lower and does not promote particle growth of the crop protection compound during storage (suitable adjuvants being amine alkoxylates, polyoxyethylene triglycerides, alkyl-polyglycosides, alkenyl succinic anhydride derivatives, polyvinylpyrrolidones, perfluoroalkyl acids derivatives, or mixtures thereof with each other or with diluents); **(c)** at least one surfactant selected from (c1) 5 to 75 g/L of non-ionic dispersants and (c2) 10 to 100 g/L of anionic surfactants; **(d)** up to 150 g/L of optional anti-freezing agents; **(e)** up to 25 g/L of optional defoamers; **(f)** up to 25 g/L optional preservatives; and **(g)** 200 to 800 g/L of water. E.g., page 2, paragraph [0005]. However, Aven does not disclose penetration enhancers such as Genapol C-100 or any other alkanol ethoxylates within the meaning of Applicants' component (b) and does not even remotely suggest that compositions containing such penetration enhancers might have any particular properties. Even if one takes into account the disclosure of dispersants of both the Soprophor types and the Pluronic types, it is evident that Aven does not provide even one example in which compounds of both types are present at the same time and thus would not suggest any advantages associated with such combinations. Regardless of whether or not Aven discloses crop protection compounds similar to or even the same as those within Applicants' claims (as suggested, for example, at page 16 of the Final Office Action), Aven is directed to a delivery system that does not suggest key components or Applicants' invention and is thus hardly likely to lead those skilled in the art to their claims as a whole.

In short, none of the cited references teach Applicants' claimed combinations of narrowly defined components in narrowly defined relative amounts nor do they provide a reason to make such combinations. Applicants therefore maintain that the cited

references, whether taken alone or in combination, would not lead those skilled in the art to their claimed invention.

Applicants are aware that the Supreme Court in *KSR International v. Teleflex*, 82 U.S.P.Q.2d 1385, 550 U.S. 398 (2007), allows a flexible approach for establishing obviousness but maintain that mere disclosure of individual components scattered within a group of references does not suggest their combination even under this liberal standard for obviousness. As recently explained by Judge Rader in a discussion of "obvious to try" analyses in the decision *In re Kubin*, 90 U.S.P.Q.2d, 1417, 561 F.3d 1351 (Fed. Cir. 2009), the proper analytical framework requires the consideration of two classes of situations where "obvious to try" can be erroneously equated with obviousness, one of which applies when one varies disclosed parameters until possibly finding a successful result and the other of which applies when prior art gives only general guidance about a new technology or promising field of experimentation (in contrast to the predictable pursuit of known options to arrive at predictable solutions as contemplated by *KSR*). See *In re Kubin*, 90 U.S.P.Q.2d at 1423 (citing and quoting *In re O'Farrell*, 7 U.S.P.Q.2d 1673, 1681, 853 F.2d 894, 903 (Fed. Cir. 1988), as well as contrasting *KSR*). When considering the first situation, Judge Rader cautioned that "where a defendant merely throws metaphorical darts at a board filled with combinatorial prior art possibilities, courts should not succumb to hindsight claims of obviousness." *In re Kubin*, 90 U.S.P.Q.2d at 1423 (emphasis added). This is, of course, consistent with many earlier decisions that have clearly established that a narrowly claimed invention is not rendered obvious merely because a reference discloses "compounds having a generic formula which would include [the claimed compounds] if proper selection from among the many possible variables were made as suitable for the claimed purpose," particularly where "the shotgun type approach of the reference . . . would not guide one skilled in the art to choose [applicants'] restricted class of compounds from among the host of possible combinations and permutations suggested by patentees." *Ex parte Strobel and Catino*, 160 U.S.P.Q. 352 (P.O. Bd. App. 1968) (emphasis added); see also *In re Baird*, 29 U.S.P.Q.2d 1550, 1552 (Fed. Cir. 1994). Although the Final Office Action offers a theoretical rationale for why the teachings of how the cited references might be combined, Applicants can find nothing more than a

hindsight construction. Applicants submit that those skilled in the art – even though finding some of the individual elements of their claimed invention by picking and choosing from among a host of possible compounds in the various references – would not have any expectation of the advantages found by Applicants for their narrowly defined combinations.

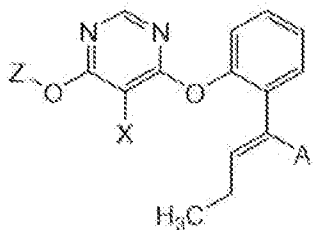
In view of the shortcomings of the cited references, whether taken individually or in combination, Applicants respectfully submit that their claimed invention is not rendered obvious by Strom et al in view of the Stock et al article or Aven.

B. Strom et al in view of the Stock et al article and in further view of Mauler-Machnik et al and Heinemann et al

Claim 16 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Strom et al in view of the Stock et al article and in further view of U.S. Patent 6,559,136 ("Mauler-Machnik et al") and WO 97/27189 ("Heinemann et al"). As again pointed out in the Final Office Action at page 11, an English language counterpart of Heinemann et al is U.S. Patent 6,103,717. (Applicants again note that the divisional U.S. Patent 6,407,233 is also a counterpart of Heinemann et al.) Applicants respectfully traverse.

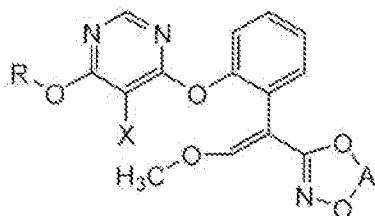
For essentially the reasons discussed above with respect to the rejection of Claims 11, 14, 15, 17, and 22, Applicants submit that the Stock et al article would not itself bridge the gap between Strom et al and their claimed invention. Applicants further submit that Mauler-Machnik et al and Heinemann et al would not lead those skilled in the art from Strom et al taken alone or with the Stock et al article to their claimed invention.

Mauler-Machnik et al discloses fungicidal combinations of **(a)** compounds of the formula



where Z represents optionally substituted phenyl; X represents halogen; and A represents heterocyclyl, $-\text{COOCH}_3$, or $-\text{CO}-\text{NH}-\text{CH}_3$ and **(b)** a mixing partner selected from a list of 82 specific compounds, among which can be found (as noted in the Final

Office Action) tebuconazole (3), epoxiconazole (10), metconazole (11), prothioconazole (69), and trifloxystrobin (75) in a broad mixing ratio of from 20:1 to 1:50. E.g., column 1, line 24, through column 2, line 62. **Heinemann et al** discloses fungicidal compounds of the formula



where A represents optionally substituted alkanediyl; R represents optionally substituted cycloalkyl, aryl, or benzo-fused heterocyclyl; E represents $-C=$ or nitrogen; Q represents O, S, $-CH_2-O-$, a single bond, or optionally alkyl-substituted nitrogen; and X represents halogen (e.g., column 1, lines 14-36), one example of which can be found fluoxastrobin (see Example 1 at column 15). However, even if prothioconazole and fluoxastrobin are known fungicides, nothing in Mauler-Machnik et al and Heinemann et al would lead those skilled in the art to the particular narrowly defined combinations of component specified by Applicants.

Applicants therefore respectfully submit that Claim 16 is not rendered obvious by Strom et al in view of the Stock et al article and in further view of Mauler-Machnik et al and Heinemann et al.

In view of the preceding amendments and remarks, allowance of the claims is respectfully requested.

Respectfully submitted,

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